



Learning Event



OPERATING PROCESS EQUIPMENT

HAZARD
Chemical
(Toxic)

**Loss of
Containment**

CONSEQUENCES

Actual: No harm to persons
Potential: No harm to persons

WHAT ARE YOU DOING TO PREPARE FOR RESPONDING TO LEAKS OF HAZARDOUS LIQUIDS AT YOUR SITE?

What Happened?

While conducting routine morning reads, a Water Treatment Facility Operator noted an irregularity with the level plot in a tank containing Sodium Hypochlorite (13%). This was brought to the attention of the Supervisor who went to inspect the tank. The Supervisor noted a thin stream of liquid coming from underneath a 50mm nozzle at the base of the tank. Smell indicated that this was Sodium Hypochlorite. The leak was draining freely to the bund drain. An exclusion zone was put in place and a water hose was set up to dilute the chemical and assist in free drainage back to the feed pond. This incident was classified as a Tier 2 Loss of Containment.



Why did it Happen?

A third-party inspection of the tank revealed that it most likely had a manufacturing defect that was not apparent until the tank aged.

What did they Learn?

Chemical Incidents require careful consideration and response. When responding it is important to conduct a risk review and select the lowest risk option. In this scenario:

- consultation and assessment provided a safe and sustainable solution to the incident.
- it was determined that the risk level of stopping the leak / attempting an immediate repair was greater than a controlled release and pump out once a suitable tank was recommissioned.
- good condition of the bund / drainage, and availability of a water source to dilute the product, allowed a measured response. Bund integrity is a key risk control to prevent / minimise harm from a chemical leak.

It is important to review spill response procedures to confirm that they identify the most appropriate response to each potential Loss of Containment situation that may be encountered.

IOGP Process Safety Fundamentals

- ✓ We improve our understanding of process safety hazards at our location and our roles in controlling them.
- ✓ We discuss the purpose of hardware and human barriers at our location.
- ✓ We discuss the work plan and what signals would tell us it is proceeding as expected.
- ✓ We pause and ask questions when signals and conditions are not as expected.
- ✓ We stop and alert supervision if the activity is not proceeding as expected.



Ask yourself or your Crew:

Are hazardous liquids (flammable, corrosive) stored at your site? Do you know what to do if you discover a leak?

Further Information:



SCAN ME

Safer Together - Maintain It video (Process Safety Awareness)



SCAN ME

Safer Together - We all have a part to play (Process Safety Awareness)



SCAN ME

Safer Together - Contain It (Major Accident Event Awareness Training)

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